

**26.** The automatic work volume calibration method of claim 25, wherein an encoder is used to track the angular orientation and determine the home position of the rotary element.

**27.** The automatic work volume calibration method of claim 25, wherein a proximity switch is used to track the angular orientation and determine the home position of the rotary element.

**28.** The automatic work volume calibration method of claim 25, wherein a microswitch is used to track the angular orientation and determine the home position of the rotary element.

**29.** The automatic work volume calibration method of claim 25, wherein a potentiometer is used to track the angular orientation and determine the home position of the rotary element.

**30.** A system for automatic work volume calibration of a haptic interface, comprising:

at least one rotary element;

at least one flag disposed on the at least one rotary element;

a user interface connection for moving the at least one rotary element through a range of motion thereof; and

means for determining angular orientation of the at least one flag to geometrically calibrate the work volume.

**31.** The system for automatic work volume calibration of a haptic interface of claim **30** further comprising:

a second flag disposed on the at least one rotary element and forming a gap between the at least one flag and the second flag; and

means for determining angular orientation of the second flag and the gap to geometrically calibrate the work volume.

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